

## ABSTRACT OF THE DISCLOSURE

A system provides two distinct solutions for encoding and decoding servo positioning data for a hard disk drive. A first solution includes: encoding each group of four bits of a pattern signal in a Matched Spectral Null (MSN) format through an intermediate rate 4/6 code; providing a duplicated bit for each bit of the six bit code word obtained with the previous step. A second solution includes: encoding each group of four bit of the pattern signal adding a parity check bit as an intermediate rate 4/5 code; encoding each of the five bits using the biphasic map. Both solutions include subsequently: reading a servo wedge information signal using a read and write channel of the hard disk drive; and using a trellis Partial Response decoding scheme matched to said encoded word for obtaining angular and radial information for the head positioning.

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